



EU klimaat en energie beleid

*Een opportuniteit voor duurzame
ontwikkeling in België*

FRDO/CFDD, Brussel, 16.11.2009

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The energy challenge

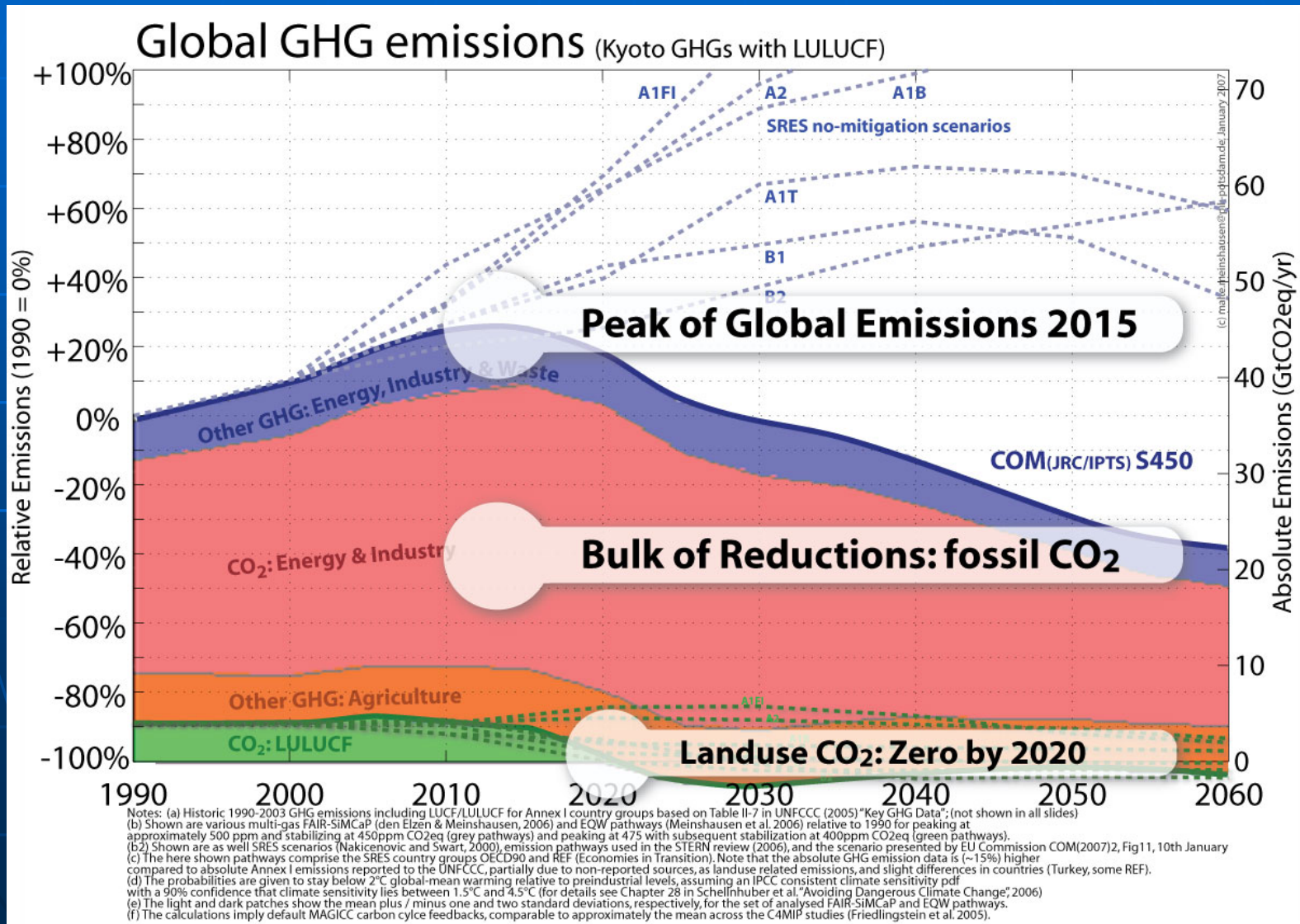
Fossil energy outlook

- rapidly growing energy demand in developing world
- declining production in North Sea and US (peak oil in the western world today)
- insecure geopolitical situation
- ownership of oil and gas reserves has changed considerably ...
- leading to underinvestment...

IEA World energy outlook 2008

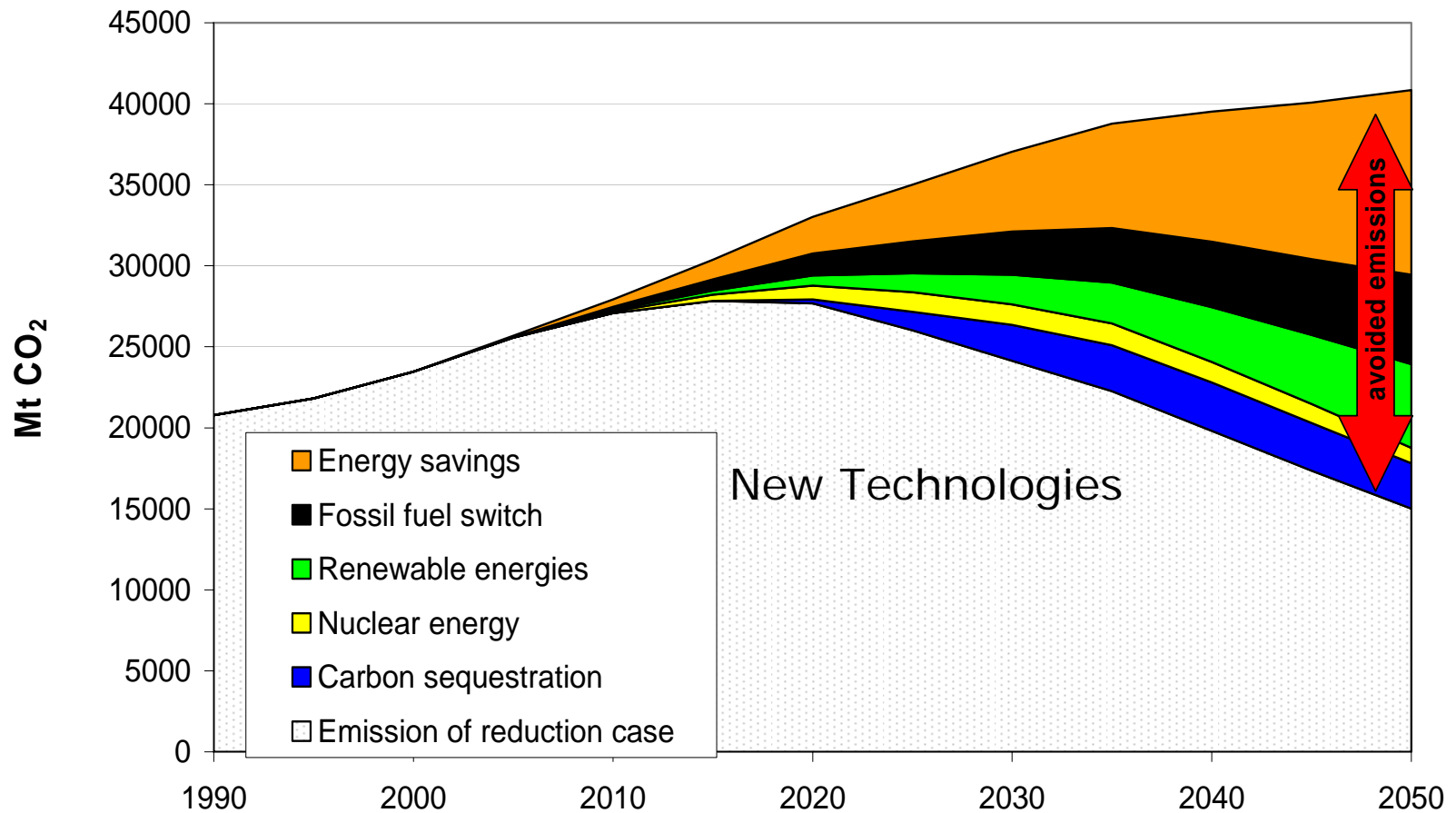
*“Beyond 2015, rising marginal costs of supply exert upward pressure on prices”
(meaning $\geq 100\$$ bbl)*

The climate challenge : How global emissions need to develop



Combining the global climate and energy challenge : a technological revolution for the world's energy system

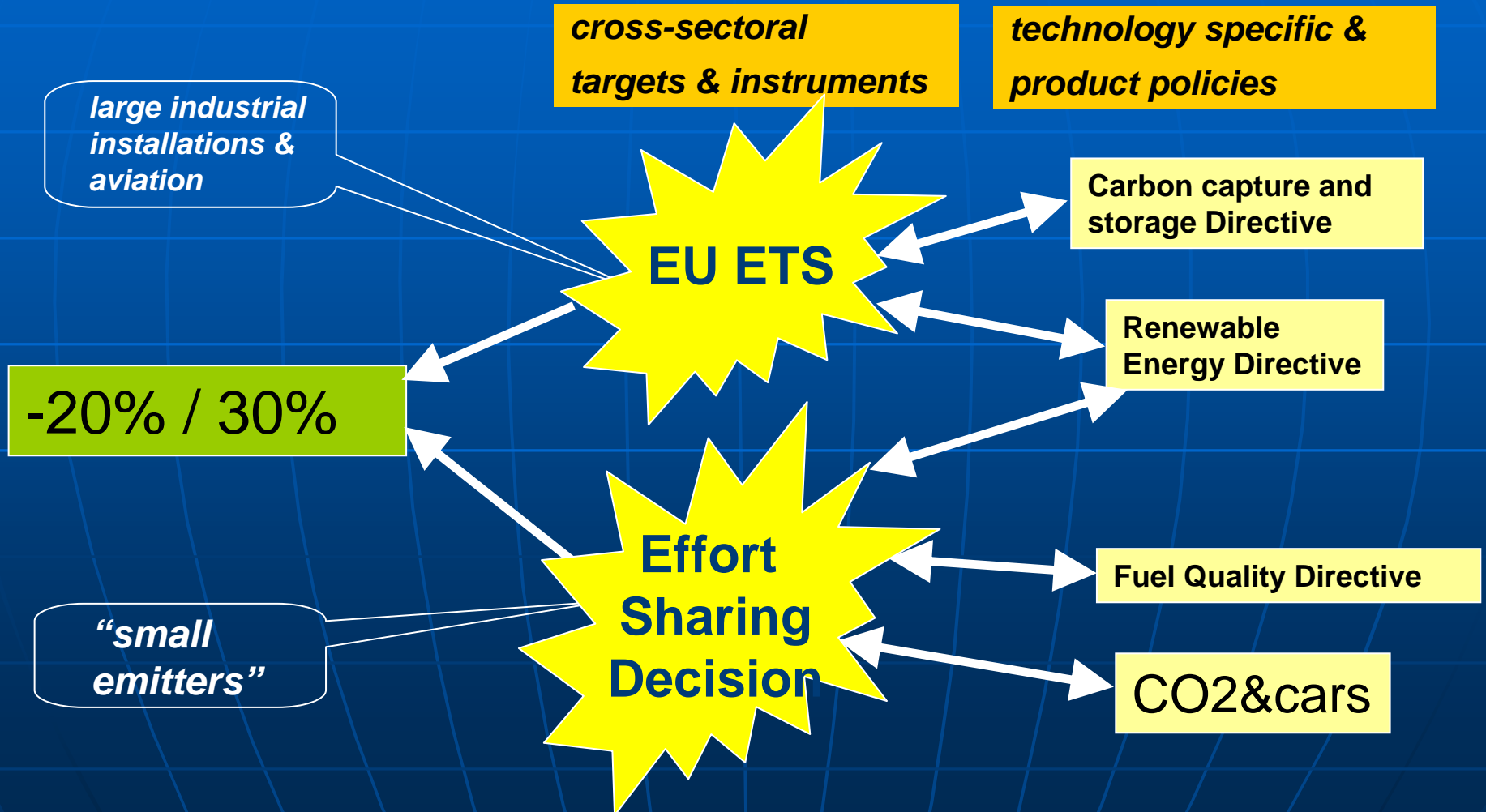
Technologies that can reduce global CO2 emissions from energy combustion



EU Objectives for 2020

- 20% GHG reduction compared to 1990
 - Independent commitment
- 30% GHG reduction compared to 1990
 - In context of international agreement
- 20% renewables share of final energy consumption
- 10% renewables in transport, with
 - production being sustainable
 - positive discrimination of second generation and electric vehicles

The Climate & Energy Package at a glance



Benefits

- **The ultimate goal: avoid the cost of climate change impacts: 5-20% of global GDP (Stern)**
- **Large scale innovation in the energy sector**
- **Leadership in low carbon technologies**
- **1 million jobs in renewable sector by 2020**
- **Energy security: reduction of oil and gas import of €50 billion per year**
- **Reduced air pollution - significant health benefits**

The revised ETS

- EU price on carbon for power and manufacturing sectors
- Auctioning for power sector
- Making low carbon technologies mainstream:
 - Will double renewable electricity in 2020 (i.e. as much as nuclear)
 - Support for CCS + innovative RES demo projects (300 Mio allowances or €5-9bn for EU-27)
- MS can use auctioning revenues to support RES

The Non ETS targets

- **Binding Emission Targets for each MS by 2020 for sectors not covered by the EU ETS (-20% to +20% compared to 2005)**
- **Small emitters e.g. transport, heating in buildings, services, agriculture, waste**
- **Requires national measures, regional action**
- **Support to MS through community-wide measures (energy efficiency standards, CO₂ from cars, energy labelling of equipment and appliances...)**

The Renewables Directive

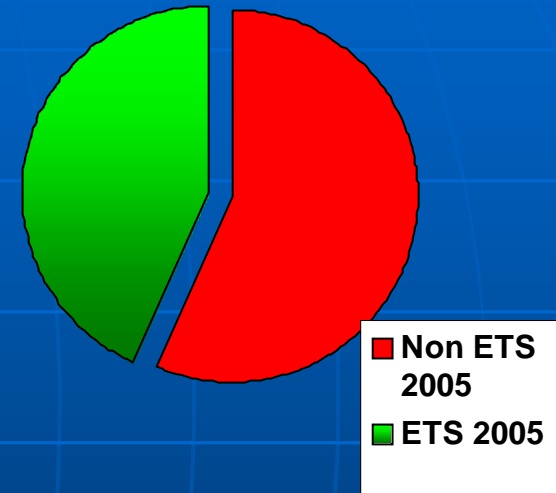
- **Binding targets for each MS for renewable energy in 2020**
- **National action plans**
- **Creates flexibility by facilitating “joint projects” with MS or third countries and “statistical transfers” between Member States to help reach targets cost effectively**
- **Requires reduction of administrative and regulatory barriers, and improved access to the electricity grid**
- **Sustainability regime for biofuels**



Belgian perspective on the challenge and opportunities

Non - ETS target is driver for sustainable investment

- Target for Belgium is 15% below 2005
- Non-ETS sector very important
- Need for federal and regional policies, supported by EU action:
 - *Transport – internalisation of external costs*
 - *Buildings – energy efficiency*
 - *Local employment opportunities*
 - *Improvements in local air pollution*



The ETS as a drive for sustainable investment

- Belgian ETS sectors cover some 45% of emissions in 2005
- Carbon price signal promotes low carbon investments
- Belgium will receive significant auctioning revenues (500-1000M€ per year as of 2013)
- Free allocation based on ambitious ex-ante benchmarks promoting only the best available low carbon technologies

RES target an enabler for RES deployment

- Belgian RES target equal to 13% by 2020
- Will require continued RES support systems, creating clear stable and long term regulatory framework, but equally...

the other policy areas

- competitive electricity markets, inducive to technological change and new entrants
- licensing procedures transparent and fast
- awareness raising and public information
- spatial planning (smart integration of RES in other spatial functions, eg. industrial sites, agriculture)
- regulation on energy performance of buildings
- professional training (plumbers, installers, architects,...)
- smart grids
- grid expansion and electrification

Wind in Belgium : a tale from the past or a view on the future?

- in the early eighties, leader on wind turbine research and technology
- today, global wind turbine multinationals are located in Germany, Denmark and Spain
- What happened in between?
 - R&D support cut down (budget restrictions, falling oil prices)
 - no support systems that spurred early local deployment
 - quasi monopoly for electricity generation, who was not interested in the technology
- Still, a few industrial companies lead in niche markets (transmissions, electrical transformers)
- Lessons :
 - a sustained effort is needed, on multiple fronts
 - RES policy is industrial policy!

Technological “wedges” which should be an opportunity for Belgian know how?

- wind turbines...off-shore wind (RES)
- solar technology, building integrated PV, organic PV (RES)
- waste and biomass derived fuels (RES)
- hybrid vehicles...
- plug-in hybrids ... battery electric vehicles (RES related)
- fuel cells
- fossil energy + carbon capture and storage
- passive houses (RES related)
- heat pumps (RES)
- smart grids , energy storage (RES enabler)
- ...

Note: All these technologies will be driven by measures to achieve the ETS, Non ETS and RES targets. These are in part European but will require also coherent policies at the Belgian national and regional level that to give the correct incentives for sustainable low carbon investment

